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Planting Seeds

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Report Highlights:
The Turkish seed industry has not reached the desired level of development, although it has realized significant improvements since the 1980's. Local seed production is not expected to meet demand for the foreseeable future. Vegetable, hybrid corn, cotton, and fodder crop seeds, as well as seed potatoes are expected to be imported through the medium term. As a part of its economic reform program the GOT ended the seed subsidy program on December 31, 2001.

Includes PSD changes: No
Includes Trade Matrix: No
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Executive Summary

The Turkish seed industry has realized significant improvements since the 1980's, but has not reached its desired level of development. The private sector, coordinated through an industry association, is responsible for the industry's development. Government-run companies focus on production of seeds for bulk commodities, while private companies produce seeds for both bulk commodities and higher value crops. Seed production and consumption are both projected to continue to increase during the next few years in response to growing demand.

Local seed production is not expected to meet demand for the foreseeable future. Vegetable, hybrid corn, cotton, and fodder crop seeds, as well as seed potatoes, are expected to be imported through the medium term. Trade statistics indicate substantial increases in imports of hybrid corn and fodder crop seeds, while imports of wheat, paddy rice, hybrid sunflower, cotton, vegetable seed and seed potatoes decreased in 2001. The total value of imports decreased slightly due to an economic crises. Turkey is primarily importing basic hybrid corn and hybrid sunflower seeds to produce and export hybrid corn and hybrid sunflower seeds. Almost all exports and imports were done by the private sector.

The GOT used to support high quality seeds by subsidizing their production and use. As a part of an economic reform package, the GOT ended the previous seed subsidy program on December 31, 2001. Only cotton and soybean seed farmers receive a ten percent additional premium at the time they sell their crops, if they also provide documents that they used certified seeds.

Turkey's membership in the UPOV (international seed association) has not been finalized due to delays in adoption of the new Turkish Variety Protection and Control Law.

There has not been any significant development on production and distribution of transgenic (GMO) seeds.

Production

Ninety-six private companies and thirty public sector entities currently produce, import, procure, or distribute seed in Turkey. Ownership of the private companies ranges from totally Turkish-owned to a combination of Turkish and foreign joint ventures and totally foreign-owned and operated companies.

Most major private seed companies are members of the Turkish Seed Industry Association (TURK-TED), which assists member companies with studies on seed production, certification, storage, packaging, distribution and variety breeding. TURK-TED has 56 members who account for about 90 percent of all private sector seed production. Privately owned companies produce about 100 percent of the hybrid sunflower and seeds as well as seed potatoes produced in Turkey. Additionally, about 99.7 percent of vegetable, 99.5 percent of hybrid corn, 98.8 percent of soybean, 54.6 percent of fodder crops, 38 percent of barley, 19 percent of cotton, and 10 percent of wheat seeds were produced by the privately owned companies in 2001. The General Directorate of Agricultural Enterprises (TIGEM-the State Farms) is TURKTED's only public member.

Public seed companies generally produce seeds for bulk commodities, including cereal, cotton and fodder crops, while private companies produce seeds for both bulk commodities and high value crops.

Certified seed distribution realizations for 2001 and production program for 2002 in Turkey are provided in the following Table 1:

Table 1. Certified Seed Production and Distribution for 2001 and 2002 (MT)

Type of Seed	Distribution Realization 2001	Production Program 2002
Wheat	58,956	291,906
Barley	6,062	30,141
Hybrid Corn	7,611	8,570
Paddy Rice	1,087	4,420
Hybrid Sunflower	1,487	10,908
Soybeans	497	12,600
Potatoes	20,569	134,461
Cotton	10,179	55,896
Cotton (Delinte)	12,841	4,958
Chick peas	656	1,083
Dry beans	28	48
Vegetables	1,770	1,533
Alfalfa	390	596
Sainfoin	843	768
Vetch (Hungarian)	580	1,234
Vetch (Ordinary)	1,407	2,374
Sudan grass	37	5
Sorghum x Sudan grass	192	100
Fodder beets	20	70
Fodder wheat crops	1,770	628

Source: National Seed Procurement, Distribution and Production Program, The General Directorate of Agricultural Production and Development (TUGEM), The Ministry of Agriculture

For the last fifty years, the General Directorate of Agricultural Enterprises (TIGEM-the State Farms), has been the major government entity carrying out seed propagation and distribution. Although its responsibilities have recently been diminished, TIGEM is still a significant producer of cereal, cotton and fodder crop seeds.
The following table provides the total quantities of seed (certified at all levels plus controlled) prepared and distributed by TIGEM in 2001:

Table 2. The Quantities of Seeds Distributed by TIGEM in 2001 (MT)

Type of Seed	Distributed in 2001
Wheat	29,734
Barley	2,615
Rye	3
Corn (Composite)	381
Sunflower (Hybrid)	10
Sunflower (Composite)	45
Cotton	645
Paddy rice	168
Dry beans	8
Chick peas	110
Vegetables	2
Sainfoin	658
Alfalfa	190
Vetch	167

Source: The General Directorate of Agricultural Enterprises (TIGEM), The Ministry of Agriculture and Rural Affairs

In addition, TIGEM produced some other seeds to plant on their own farms only.

Consumption

Although seed use decreased in 2001 due to the economic crisis, consumption should continue to increase in the longer term in response to growing demand, particularly for greenhouse vegetable production. In addition, demand for hybrid corn (especially for silage), hybrid sunflower and fodder crop seeds are expected to continue to increase in response to higher demand for poultry and livestock, and vegetable oil.

Certified seed usage varies from 6 percent to 100 percent in Turkey. The following table presents the percentages of the certified seed usage by variety in Turkey.

Table 3: Certified Seed Usage Ratio in Turkey

Variety of Seed	Certified Seed Usage Ratio (%)
Wheat	10
Barley	6
Hybrid Corn	100
Hybrid Sunflower	100
Potatoes	20
Cotton	50
Sugar Beets	100
Vegetables	25
Fodder Crops	50
Soybeans	25

Source: The General Directorate of Agricultural Production and Development (TUGEM), The Ministry of Agriculture

Trade

Domestic seed production is not sufficient and is not expected to increase adequately to meet demand in the medium term. Vegetable, hybrid corn, hybrid sunflower, cotton, and fodder crop seeds, as well as seed potatoes, are among the seeds that Turkey is expected to continue to import at significant levels for at least the next three to five years. From time to time and depending upon supply and demand, other seed types may be imported on a temporary basis.

According to Ministry of Agriculture (MARA) data, Turkey imported about 11,115 MT of seed worth about USD 53.5 million and exported about 5,984 MT of seed worth about USD 16.9 million in 2001. Although the overall quantity of seed imports has been decreasing in recent years, value has continued to increase. In 2001, however, the value of imports fell slightly, which is generally attributed to the economic crises. About 90 percent of the corn seed is imported from the United States. Israel and the Netherlands are the leading exporting countries of vegetable seed for greenhouses. Some vegetable seed for field production is also imported from the United States.

Hybrid corn and fodder crop seed imports increased significantly in 2001, while imports of wheat, paddy rice, hybrid sunflower, cotton and vegetable seed and seed potatoes decreased. Barley, hybrid corn, fodder crops and grass seed exports increased in 2001, while exports of wheat, cotton, hybrid sunflower, and vegetable seeds decreased. Turkey is primarily importing basic hybrid corn and hybrid sunflower seeds to produce and export hybrid corn and hybrid sunflower seeds.

TIGEM has been the only public company involved with seed imports and exports in recent years. TIGEM exported 794 MT of barley and about 80 MT of wheat seeds primarily to the Central Asian Countries in 2001. TIGEM also intended to import 18 MT of wheat seed from Italy, but the seed was rejected at the border due to mosaic virus. All other international trade was conducted by private sector companies. Turkey's seed imports and exports for 2001 are presented in Table 4 and Table 5, respectively.

Table 4. Seed Imports in 2001 (MT)

Type of Seed	Imports
Wheat	21
Corn (Hybrid)	3,937
Cotton	177
Sunflower (Hybrid)	17
Potatoes	3,126
Fodder crops (total)	774
Grass (total)	2,176
All vegetables (total)	887
Grand Total	11,115

Source: The General Directorate of Agricultural Production and Development (TUGEM), The Ministry of Agriculture and Rural Affairs

Table 5. Seed Exports in 2001 (MT)

Type of Seed	Exports
Wheat	679
Barley	794
Corn (Hybrid)	3,368
Cotton	267
Sunflower (Hybrid)	1,487
Fodder crops (total)	51
Grass (total)	37
All vegetables (total)	59
Grand Total	5,984

Source: The General Directorate of Agricultural Production and Development (TUGEM),
The Ministry of Agriculture and Rural Affairs

Policy

General Agricultural Policy

The GOT used to heavily subsidize agricultural inputs, including seeds, irrigation, fertilizer, and producer credit and also provided production incentives through high procurement prices. However, the policy has been changing and the current government has made a commitment to reduce subsidies over time.

The components of the reform program include phasing out existing support policies and replacing them with a direct income support system targeted at poor farmers. A registration system to support the new program is still being developed.

Although the pace of development has slowed due to an ongoing economic crises, the GOT continues to work on two major agricultural projects --these are Southeastern Anatolia Project (GAP) and Livestock Development Project (LDP), both of which are expected to have a significant impact on seed demand.

Seed Production Policy

Seed Law Number 308 was adopted in 1962 and placed all seed production, importation and pricing under government control. Since 1982, there have been numerous revisions and amendments to encourage privatization, as well as to regulate the importation, production, procurement, certification and distribution of high quality seeds. The current law is considered outdated by both the industry and government and a Ministerial commission composed of both of these groups, as well as universities and the Seed Industry Association, are developing an updated version which incorporates an EU model for the basic infrastructure of the seed business. Due to the nature of the process, it may take several years before a new Law is adopted.

To support the use of high quality seeds, the GOT used to subsidize seed production through credit and lower seed prices. As a part of the economic reform program, the government ended the seed subsidy program on December 31, 2001. Since January 1, 2002, only cotton and soybean producers are paid a ten percent additional premium for seeds at the time they sell their crops, if they also provide documents that they used certified seeds.

The following table provides aggregate subsidy expenditures by seed type in 2001. Subsidy expenditures for only paddy rice and vetch received significant increases in 2001. Subsidies were lowered for all other seed types.

Table 6. Aggregate Seed Subsidy Expenditures in 2001

Type of Seed	**Subsidy Expenditures (TL Billion)**
Cotton	685.0
Sunflower	546.1
Paddy rice	109.5
Potatoes	54.9
Soybeans	14.6
Vetch	7.4
Alfalfa	2.9
Sorghum x Sudan grass	1.0
Sudan grass	0.2
Fodder beets	0.1
Grand Total	1,421.5

Source: General Directorate of Agricultural Production and Development (TUGEM),
The Ministry of Agriculture and Rural Affairs

Plant Varietal Protection

On September 26, 1994, the Turkish Government published a Variety Protection and Control Decree to better regulate local seed production, certification and distribution and issued implementing regulations. Although Turkey plans to join the international seed association, UPOV, its membership has been delayed due to discrepancies between the above-mentioned Turkish decree and UPOV regulations. The new seed law, which is currently being developed, should superseed the decree and eliminate the conflicts.

Import Tariffs
The only significant changes in 2002 seed tariffs was a reduction for "all other" planting seeds from 19 percent to 18.4 percent for imports from EU and EFTA countries, and from 21 percent to 20.4 percent for other countries. Table 7 presents the current rates for various seed imports.

Table 7: Import Duties on Seed Imports

Type of Seed	EU & EFTA Countries (%)	Other Countries (%)
Cereal seeds (except rice)	0	0
Rice seeds	10	12
Sunflower seeds	0	0
Soybean seeds	0	0
Peanut seeds	20	20
Rapeseed	0	0
All other oil seeds, inc. cotton, sesame, safflower, palm and mustard	4	4
Hemp fibre seeds	4	4
Flax fibre seeds	16	16
Tea seeds	4	4
Sugar beat seeds	2.4	3.9
Flower seeds	4	6
Forest tree seeds	4	6
Fruit tree seeds	4	6
All other planting seeds (12.09), including all vegetable and fodder crop seeds	18.4	20.4

Source: Official Gazette dated December 31, 2001

Although Table 7 establishes tariff levels for seeds, since 1993 the Ministry of Agriculture has had the right to suspend import duties, if those seeds are considered necessary. MARA officials indicate that except for flower and ornamental plant seeds, almost all seeds are currently imported duty free. Flower and ornamental plant seeds for propagation are also being imported with zero duty. Importers who import flower and ornamental planting seeds for commercial purposes (e.g., reselling) are obliged to pay the duties.

Non-Tariff Issues

Seed imports are restricted to those companies which produce, procure, and market seeds domestically (including the Farmers' Union, Agricultural Credit Cooperatives and Agricultural Sales Cooperatives). The Ministry of Agriculture justifies this policy as a means of encouraging investments in the domestic seed industry, since most private seed companies have acquired their capital and technical expertise from joint ventures with international firms. Additionally, importers must have an import license from the Ministry of Agriculture. Before seeds may be imported, they must be grown locally on trial plots and approved by the Ministry.

Last year, the Ministry of Agriculture sent a letter to the seed industry companies which instructed seed companies to organize their 2001 programs in way which would allow them to meet all of their seed needs through domestic production. Most seed companies and the Turkish Seed Industry Association (TURK-TED) recognized the apparent impracticality of this requirement. They lobbied heavily against the proposal and, as a result, it was not applied. Nonetheless, a certain decree of uncertainty has continued because that letter was not pulled back or pronounced invalid.

Last year, the Ministry issued new requirements for seed potatoes and restricted imports, based on concerns about several pests including "spongospora suppterena." The tolerance level for this disease was set at a maximum 0.5 percent by weight and ten percent of surface area. Companies which had invested in potato production to help development of Turkey's potato seed industry (and had discontinued potato imports), reported that unless the limits were raised, reduced seed imports would lead to a serious shortage of seed potatoes for the next crop season. They also questioned the Government of Turkey's commitment to encouraging new foreign investments in the agriculture sector. Although a few companies managed to resume their imports, other potential importers report that the problem is still not resolved.

Genetically Modified Organisms (GMO's)

There have been no new significant developments on this issue during the last year.
Production of transgenic seeds (GMO) varieties have been discussed in Turkey since 1996, with conflicting views on the issue. Some U.S. seed companies started producing GMO corn, cotton, and potato seeds in Turkey several years ago. Problems began when the companies tried to register the varieties. In 1998 the Ministry of Agriculture issued a regulation which restricted GMO trials and required that all trials involving transgenic materials be carried out at MARA research institutes. Two new regulations are being developed including one which applies to GSM registration, and a second which applies to distribution and release in the environment and marketplace. MARA officials previously indicated that they were planning to adopt a Canadian-styled model for registration of GMO seeds.

The Government charges USD 20,000 for each trial's variety and location. The cost of the trial and, even more important, restricting the trial to only one location concerns seed company officials who believe that limiting trials to one location will increase the likelihood of the research being incomplete and would, at best, delay approval by at least one year. Two years ago, TURK-TED asked MARA officials to increase the number of locations and reduce the cost of trials, but the Ministry has not yet responded. Some GMO corn and cotton trials have been completed. Although the producers claim positive findings, the results have not yet been officially announced.

Export Subsidies
There is no direct subsidy on seed exports. However, there are indirect subsidies on exported seeds to the extent that their production and processing costs are reduced with use of subsidized inputs and credit.

Marketing

Several U.S. seed companies, including Pioneer, Monsanto, Delta Pine, Lamb Weston are well-established in Turkey. These companies generally import parent seed for local propagation, with most of their production sold domestically. Surplus production may be exported, usually to Middle Eastern and European markets.